

11. LINWOOD AVENUE/WORCESTER STREET INTERSECTION

Officer responsible City Streets Manager	Author Mike Calvert, Transport Planner – Policy, DDI 941-8611
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The purpose of this report is to inform the Council of the traffic management options for the Worcester Street/Linwood Avenue intersection in response to concerns expressed by some residents about the existing layout.

The Hagley/Ferrymead Community Board has also seen this report and decided to recommend to the Sustainable Transport and Utilities Committee that the design of the intersection of Worcester Street with Linwood Avenue be reviewed to limit the number of illegal manoeuvres through the right turn bays.

BACKGROUND

Linwood Avenue, from Gloucester Street to Worcester Street, was reconstructed in its present form as a four lane, median divided road in 1988. At the time of reconstruction it was proposed that the solid median be carried through the intersection with Worcester Street to close it off to through traffic. The public consultation pamphlet released at the time had the following to say regarding the intersection of Linwood Avenue with Worcester Street. *"It is also necessary for safety and to reduce through traffic in Worcester Street to carry the median unbroken across Worcester Street."* Due to public opposition to the proposed restrictions to access, the intersection was reconstructed at that time with a gap in the median to allow all traffic movements to be undertaken.

In the five year period between June 1993 and 1998 there were 20 crashes at the intersection. It was again suggested by City Streets staff that, on safety grounds, the median should be closed to vehicular traffic. Whilst there was some public support for the idea a number of people objected to the closure and at the time there was also a bus service which used this route. The intersection was consequently redesigned to allow for right turns into Worcester Street from Linwood Avenue. The reconstructed intersection has improved safety dramatically and in the four years since the work was completed in 1998 there has only been one crash at this site.

The work undertaken has resulted in definite and obvious safety benefits at this intersection although there has been some negative feedback from the public with respect to the limitations on through movements along Worcester Street across the Linwood Avenue intersection and there is now also an issue with people driving the wrong way through the right turn bays.

ACCESS ALONG WORCESTER STREET

Safety problems at intersections frequently occur due to particular movements creating problems for drivers misjudging speeds or becoming impatient and making bad decisions. This is why safety improvements will often either restrict/stop particular movements, or control them and take the decision making out of the driver's hands to some extent or other (eg roundabouts and signals). Because drivers do not like to have their mobility restricted, safety works are often compromised to provide some measure of access and decisions are normally made weighing the access issues against the safety of the alternatives.

In the case of the Linwood/Worcester intersection it has been suggested by some residents that the break in the median should be reopened to all traffic and controlled by traffic signals or a roundabout. Whilst this would address some of the safety concerns at this site it would invariably lead to more crashes than the present arrangement. It would also not address the planning issues with regard to the function of Worcester Street. The opening of the median would lead to far higher flows of traffic using this road to head into the central city from the eastern suburbs and vice versa. This is in direct contradiction to the stated function of a local road in the City Plan which is to *"...function almost entirely as access ways and are not intended to act as through routes for motor vehicles."* The function of the road is being reflected in the centre of the city by the Council decision to close the road at Latimer Square and it would also be prudent, both in terms of safety and efficiency, to also close the median gap at Fitzgerald Avenue.

RIGHT TURN BAYS

It has been reported that there are a small number of drivers performing illegal manoeuvres at the right turn bays by driving through these facilities the wrong way to link with the other section of Worcester Street by driving across Linwood Avenue instead of using Gloucester Street, which is a controlled cross junction. This does not seem to be creating a safety hazard but there is obviously the potential for crashes to be created by movements which have not been specifically allowed for in the design.

Options

1. Do Nothing

To undertake no further changes at the intersection is obviously the cheapest option. The intersection is currently operating safely and efficiently, although there is the reported issue of the illegal manoeuvres by drivers through the right turn bays. Having been advised of the issue the Council should not ignore the potential safety hazards involved in these manoeuvres.

2. Revise Existing Layout

Setting aside for the moment the issue of access, the concern regarding the misuse of the existing facilities could possibly be resolved quite cheaply and easily through some minor adjustments to the central islands (attached). This would make the manoeuvre far more difficult to undertake for car drivers, although the need to provide for large vehicles means there will always be the ability to travel through it the wrong way, but it would be almost impossible for trucks to negotiate in the wrong direction.

3. Close the Median

The option of a full closure of the median would be a cheap and simple procedure to undertake, although it is unlikely to receive support from many local residents. The bus route which previously travelled along Worcester Street was re-routed onto Gloucester Street in association with the north-east suburbs review some two years ago and is therefore not now an issue in this debate. The closure would stop all illegal manoeuvres and is obviously the safest option, notwithstanding the fact that it does reduce access into Worcester Street.

4. Traffic Signals

Traffic signals could be installed at the intersection, although there is currently no money budgeted for any work at this location. The cost of providing traffic signals at the Gloucester Street/Linwood Avenue intersection would be of the order of \$150,000. The installation of signals does not fit with any of the objectives and policies in the City Plan for the development of the roading hierarchy and would be against good transport planning principles. The introduction of signals would encourage motorists to use Worcester Street as a through road and would inevitably require further works to be undertaken along the route to provide for the increase in traffic.

5. Roundabout

A roundabout would be an extremely expensive option, requiring the acquisition of land to provide for a fully complying multi-lane facility. It is estimated that a roundabout at this location would be likely to cost between \$500,000 and \$750,000. As with any roundabout it would introduce difficulties for cyclists along both Linwood Avenue and Worcester Street. As with the signals option, it does not fit with any of the objectives and policies in the City Plan for the development of the roading hierarchy and would be against good transport planning principles.

DISCUSSION

The intersection of Worcester Street with Linwood Avenue currently works safely and efficiently, other than the occasional illegal manoeuvre undertaken by some motorists. Whilst this has not, so far, resulted in any reported crashes there is the increased potential for crashes to occur. The manoeuvres could be stopped with minimal cost through either the closure of the median, or the extension of the existing islands. The former would be most effective in terms of safety, but is unlikely to receive public support. The latter would reduce the problem and retain a higher level of access for local traffic.